

Work Order ID 140115

Thursday, December 17, 2015 3:42:44 PM

Page 1

Item ID: 646.3301

Revision ID:

Item Name: Upper Cutter Assy

Start Date: 12/17/2015 Start Qty: 5.00

Required Date: 12/17/2015 Req'd Qty: 5.00

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: MLJ

Date: DEC 22 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.3300	NC3

110	Pick Kit	0.00
-----	----------	------

110

Packaging Memo

Packaging

120		0.00
-----	--	------

120

Small Fab Memo

Small Fab

0.05

TWO fastener must be install finger-tight (see note 9)

Assemble as per dwg and apply loctite 598 on all faying surfaces shown on dwg per note 7.

A/R RTV LOCTITE 598: 1133436

exp. date: 07/17

JAN 04 2016

36
9-89

3X

12/01/04

DAS
36
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 140115

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Item ID: 646.3301 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Upper Cutter Assy
Start Date: 12/17/2015 Start Qty: 5.00 *5* Cust Item ID:
Required Date: 12/17/2015 Req'd Qty: 5.00 *5* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
130									
QC	Memo	0.01							
Quality Control									JAN 06 2016
140	Identify as per dwg & Stock Location: <u>CCK18</u>	0.00							
140									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.00							
Quality Control									

ML5 JAN 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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Work Order ID: 140115

140115

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assy

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 12.10.19 NEW ISSUE DD VERF:JLM
REV:B 15.01.07 AS PER DWG NC3 DD VERF:JLM

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.3310 *646 3310* LH Half		Manufactured	No			110	Each	10.0000	1	3		16/01/04	DAS 36 9-89
**													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK022				10					
				124425				2		2			
				136232				4		1			
				136656				4					
646.3311 *646 3311* RH Half		Manufactured	No			110	Each	8.0000	1	3		16/01/04	DAS 36 9-89
**													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK022				8					
				136146				4					
				136472				4		3			
646.3312 *646 3312* Center Plate		Manufactured	No			110	Each	11.0000	1	3		16/01/04	Df BAS 9-89
**													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				cck103				11					
				125437				3		3			
				136728				8					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

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Work Order ID: 140115

140115

Parent Item: 646.3301

646 3301

Parent Item Name: Upper Cutter Assy

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 5.00

Required Qty: 5.00

646.3313	Manufactured	No	110	Each	5.0000	1	8 3		DAS
646 3313									36
Upper Guide									9-89
						**		16/01/04	

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			cck059A	5					
			135457	5			3		
646.3314	Manufactured	No		110	Each	4.0000	1	8 3	DAS
646 3314									36
Blade									9-89
						**		16/01/04	

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			cck103	4					
			136680	4			3		
646.3315	Manufactured	No		110	Each	10.0000	1	8 3	DAS
646 3315									36
Blade									9-89
						**		16/01/04	

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>				
			cck103	10					
			136236	4			3		
			136663	6					
646.3316	Manufactured	No		110	Each	3.0000	1	8 3	DAS
646 3316									36
Blade									9-89
						**		16/01/04	

			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
			cck103	3	
			136170	3	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐			
		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

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Work Order ID: 140115

140115

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 5.00

Required Qty: 5.00

NAS1149FN832P

Purchased

No

110

Each

4,171.000

36

180 108

DAS
36
9.89

NAS1149FN832P

Washer

**

16/01/04

Location

Loc Qty

Loc Code

GA	2339
M133316	16
M133769	2323
ST262	1832
M133709	1832

108

MS21042L08

Purchased

No

110

Each

449.0000

18

90 54

DAS
36
9.89

MS21042L08

Nut

**

16/01/04

Location

Loc Qty

Loc Code

CA	101
m129682	101
GA	18
m133134	18
ST303	287
m133483	287
ST304	43
m128401	32
m131317	11

15
39

DAS
36
9.89

NAS1149F0332P

Purchased

No

110

Each

1,633.000

6

30 18

NAS1149F0332P

Washer

**

16/01/04

Location

Loc Qty

Loc Code

GA	476
m133709	476
ST262	1157
m133709	1157

18

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Work Order ID: 140115

140115

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 5.00

Required Qty: 5.00

AN3-12A	Purchased	No	110	Each	106.0000	2	18 6		DAS
AN3-12A									36
Bolt									9.89

**

16/01/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	2	
m129682	2	
ST349	104	
m133064	16	
m133234	88	

MS21042L3	Purchased	No	110	Each	1,782.000	3	18 9		DAS
MS21042L3									38
Nut									9.89

**

16/01/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	185	
m133790	185	
GA	234	
m133790	234	
ST304	1363	
m133790	1363	

MS27039-08-19	Purchased	No	110	Each	641.0000	18	98 54		DAS
MS27039-08-19									36
Screw									9.89

**

16/01/04

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	106	
m132930	84	
m133077	22	
over006	350	
m133483	350	
ST277	185	
m133769	185	

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY					
Environment ☐		No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐		Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐		Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐		Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐		Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐		Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐		Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐		Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐		Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐		Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐		Manufacturing Process ☐	OTHER : ☐					
Misidentified ☐		Past Due ☐						

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Work Order ID: 140115

140115

Parent Item: 646.3301

646.3301

Parent Item Name: Upper Cutter Assy

Start Date: 12/17/2015

Required Date: 12/17/2015

Start Qty: 5.00

Required Qty: 5.00

AN3-14A

Purchased

No

110

Each

97.0000

1

53

AN3-14A

16/01/04

DAS
36
9-89

Bolt

Location

Loc Qty

Loc Code

ST349

97

m133363

97

3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐							
Misidentified ☐	☐	Past Due ☐	OTHER : ☐						

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED
BY

J. SOTO

DATE: 12/08/2014

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY:

ENGR

MFG

QC

EFF.

NEXT ORDER

TRANSACTION CODES (TC):

A-ADD
R-REVISE

C-CREATE
D-DELETE

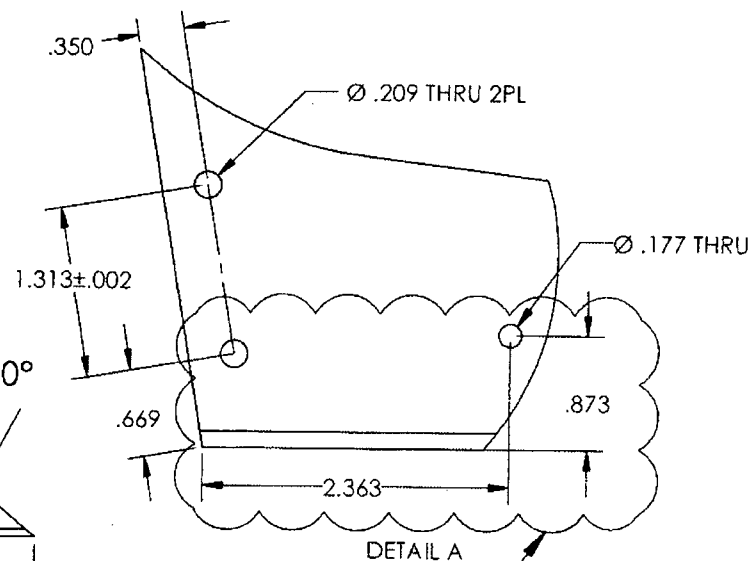
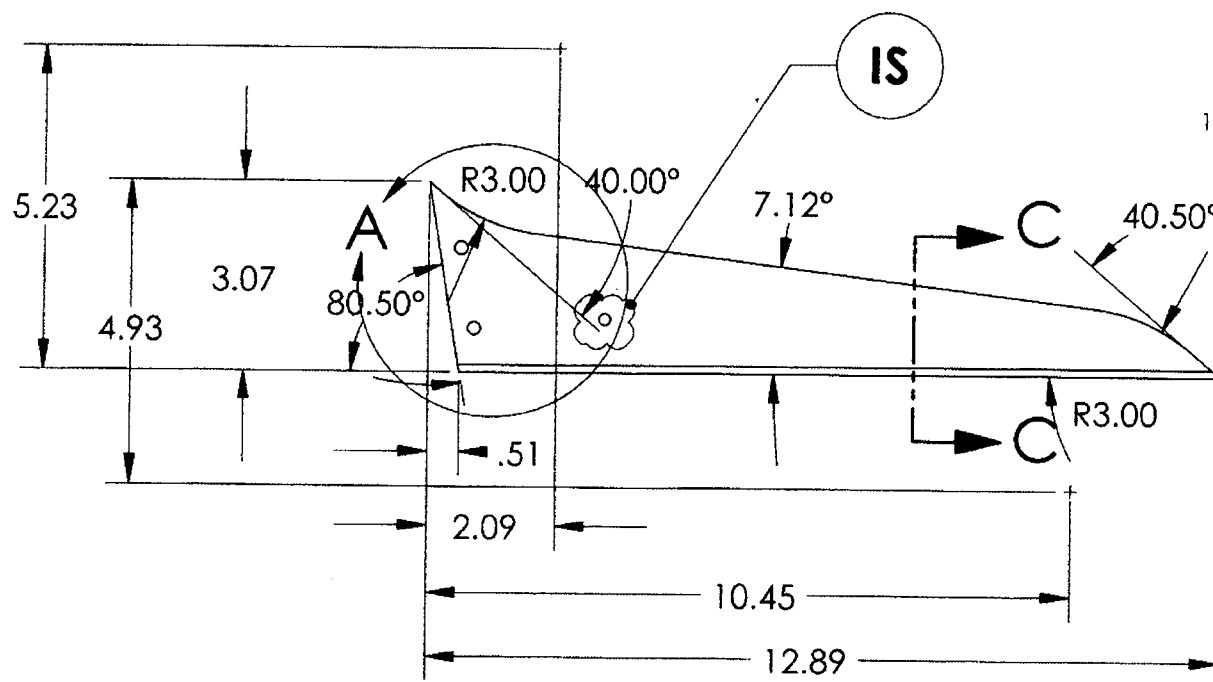
REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:

STOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

IN ORDER
140115 MJS

MLJ
15-12-22



DOCUMENTS EFFECTED:

☐ MDL☐ INSTALL INSTRUCTIONS☐ ICA☐ FMS

☐ BOM

CHANGE CATEGORY

☐ MAJOR☒ MINOR

DER REVIEW REQUIRED

☐ YES☒ NO

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03724

SHEET 1 OF 1

DWG NO. 646.3300

REV: N/C

PREPARED
BY B. PETERS

DATE: 12/05/12

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY: ENGR

MFG

QC

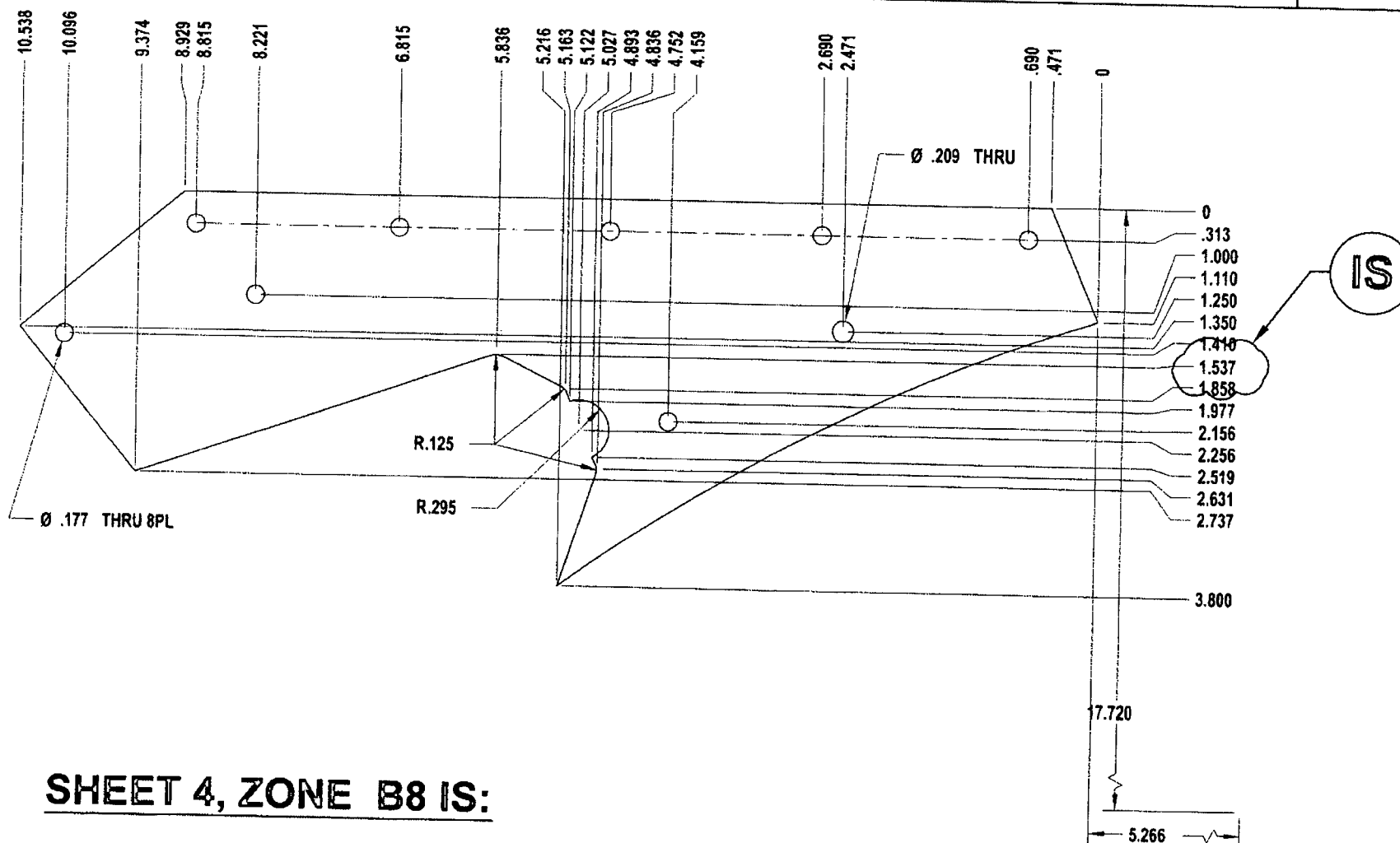
EFF: NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON:

REVISED ORDINATE DIMENSION.

ECR:
D-12-025



SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:

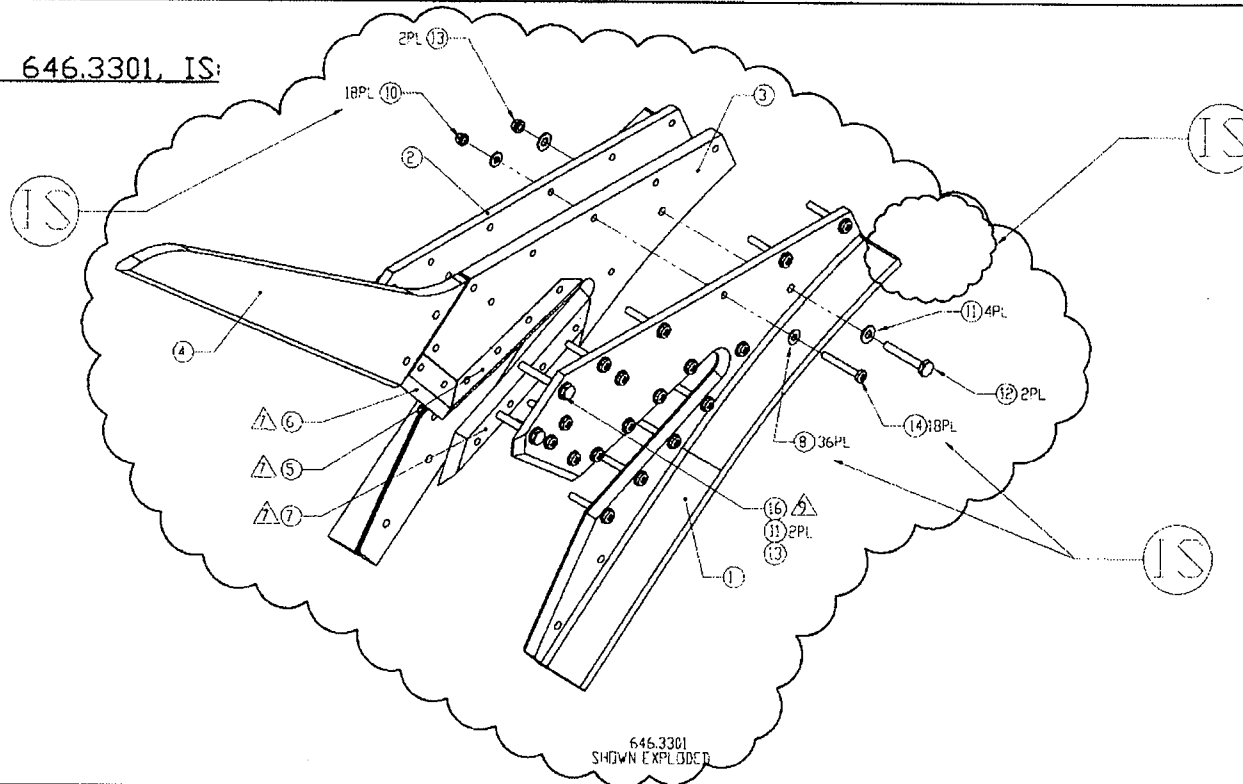
☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

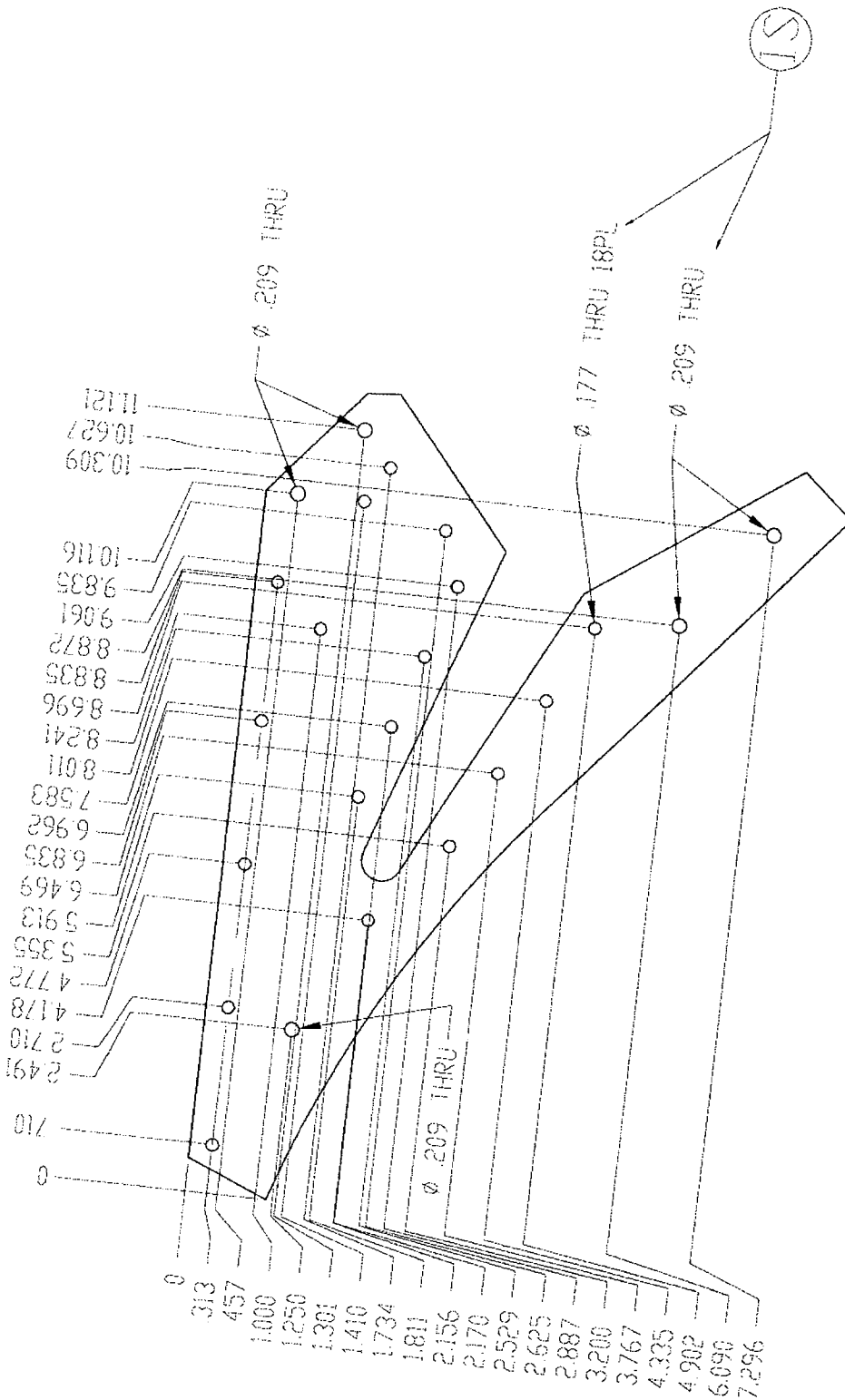
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196		SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	EFFECT ON DWG ☐ INC. ☒ UNINC.			
DWG TITLE: UPPER CUTTER ASSY				
APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER	
REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS				
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE				

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			3301		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED:					CHANGE CATEGORY
☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR
					DER REVIEW REQUIRED
					☐ YES ☒ NO

SHEET 3, SECTION VIEW A-A, IS:

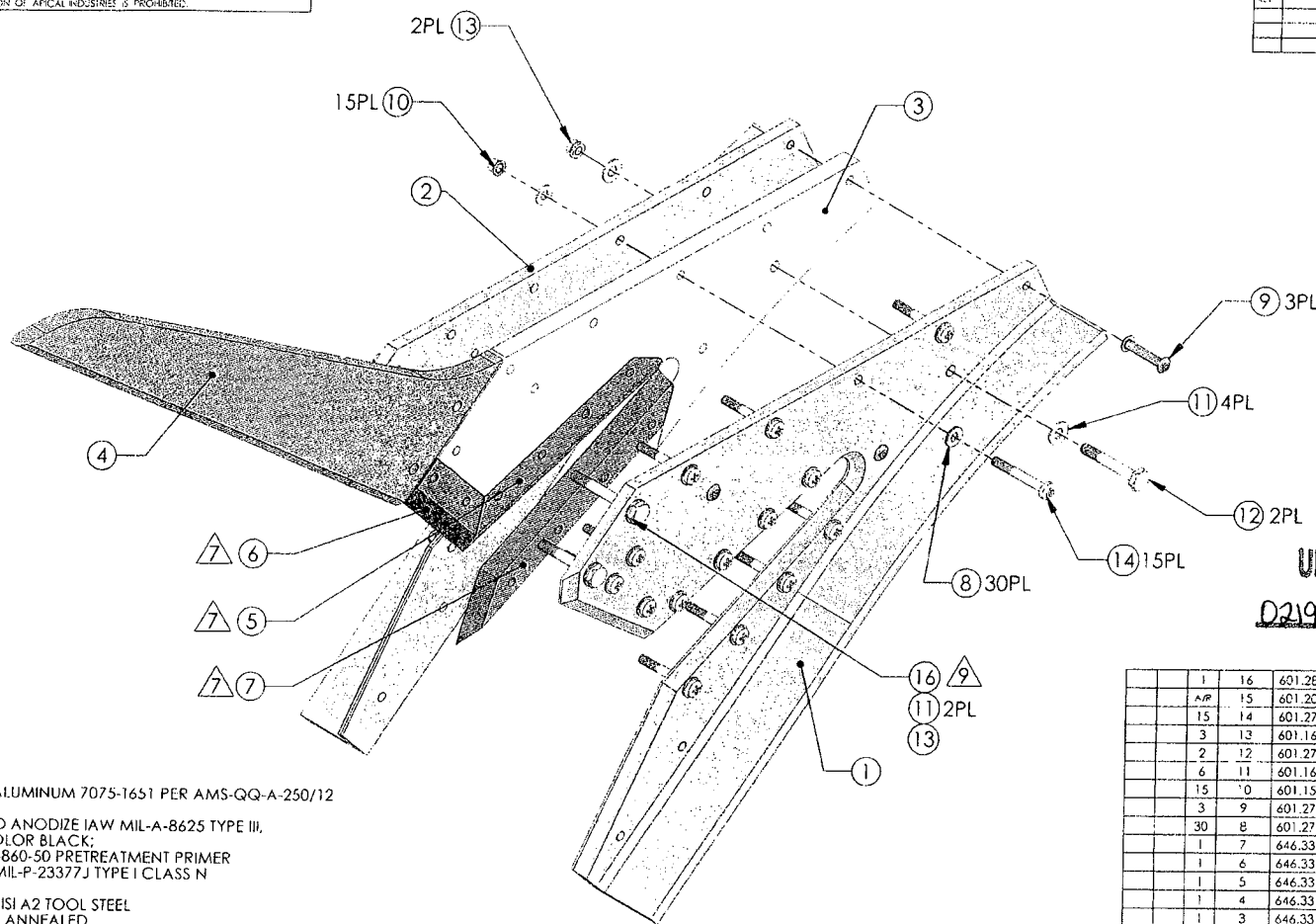


SECTION A-A

PART NUMBER	QTY	DESCRIPTION
-------------	-----	-------------

MATERIAL/SPECIFICATION

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 INSTALL FASTENER FINGER-TIGHT

646.3301
SHOWN EXPLODED

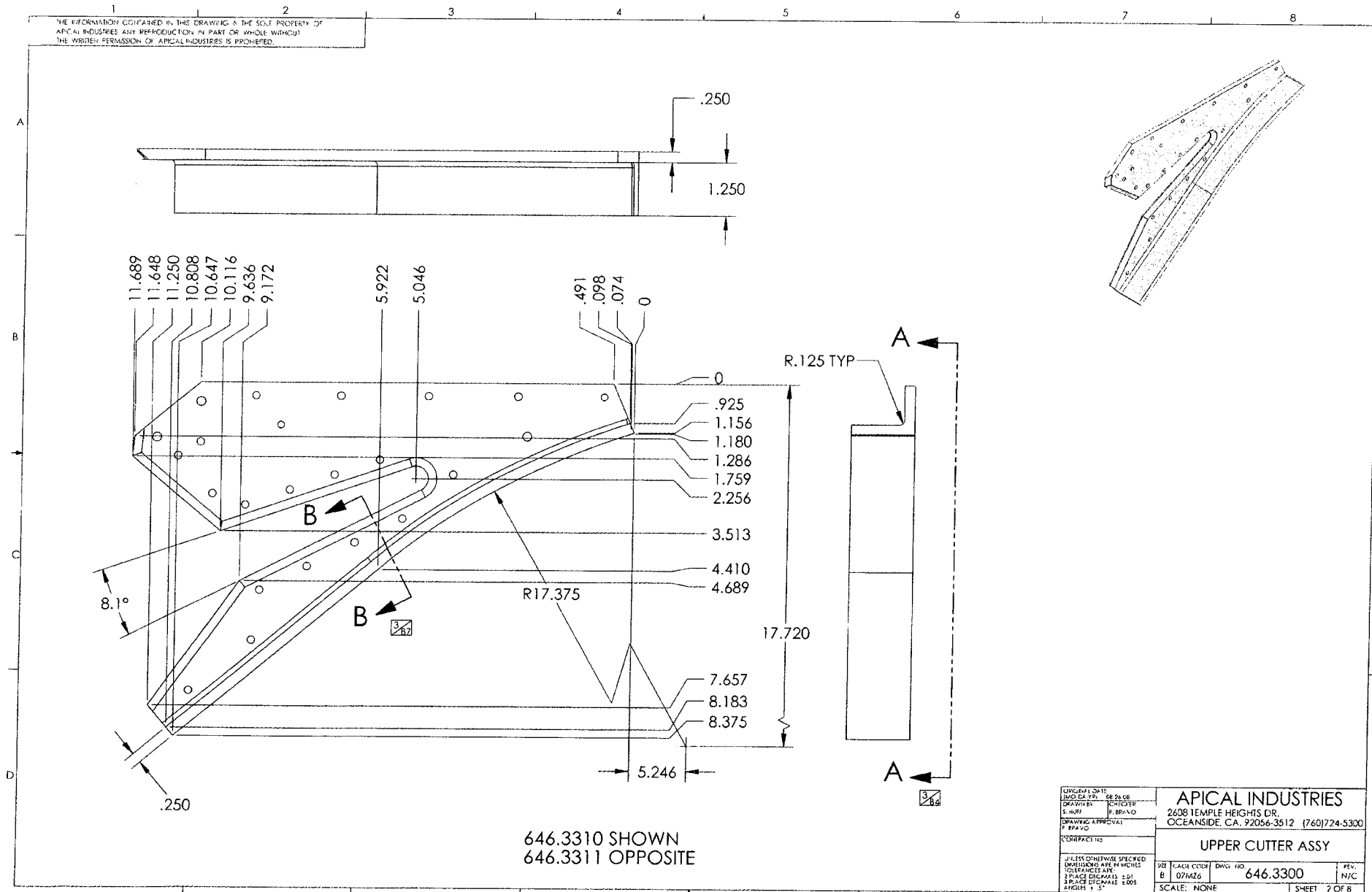
REV	DESCRIPTION	DATE	APPROVED

UNINCORPORATED ECN(S)

02194, 03724, 04765

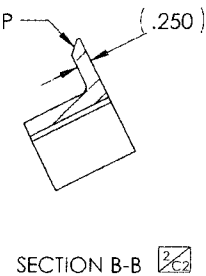
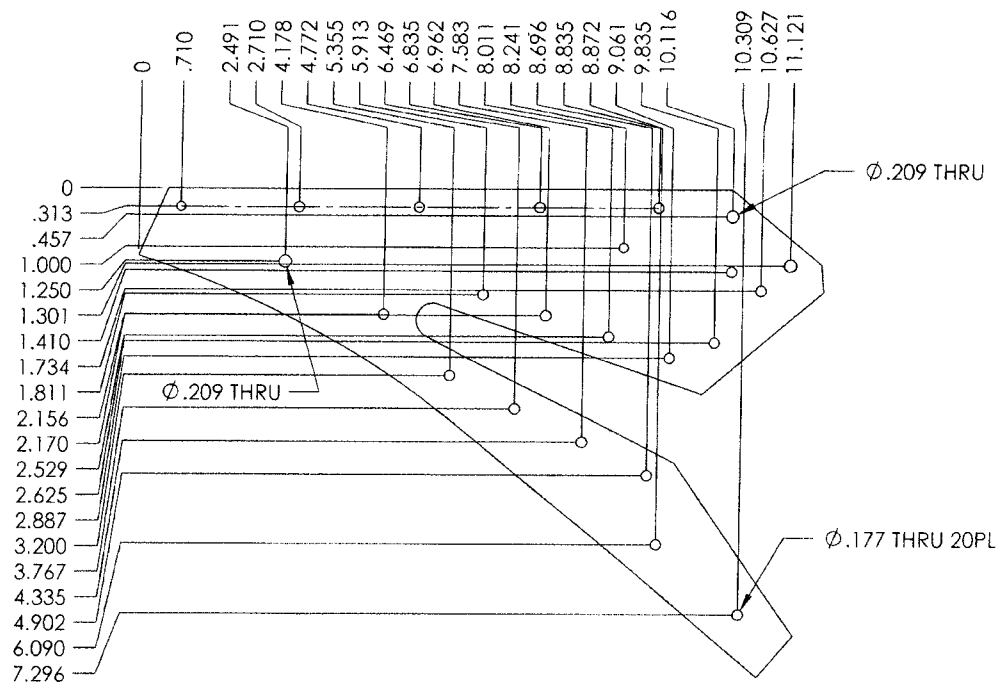
QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
1	16	601.2834	BOLT	AMS 144	
15	15	601.2045	RTV, LOCTITE 598		
15	14	601.2765	SCREW	MS27039-0815	
3	13	601.1624	LOCKNUT	MS2104615	
2	12	601.2763	BOLT	AMS-12A	
6	11	601.1607	WASHER	MS1149903351	
15	10	601.1541	LOCKNUT	MS1046208	
3	9	601.2766	RIVET	MS20476A05-1R	
30	8	601.2764	WASHER	MS114991022F	
1	7	646.3316	BLADE		
1	6	646.3315	BLADE		
1	5	646.3314	BLADE		
1	4	646.3313	UPPER GUIDE		
1	3	646.3312	CENTER PLATE		
1	2	646.3311	RH HALF		
1	1	646.3310	LH HALF		
1		646.3301	UPPER CUTTER ASSY		
PARTS LIST					
APICAL INDUSTRIES					
2608 TEMPLE HEIGHTS DR.					
OCEANSIDE, CA. 92056-3512 (760)724-5300					
UPPER CUTTER ASSY					
UNLESS OTHERWISE SPECIFIED					
DIMENSIONS ARE IN INCHES					
TOLERANCES ARE:					
FRACTIONS DECIMALS					
ANGLES 1/2°					
REV	DESCRIPTION	DATE	APPROVED	REV	DESCRIPTION

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APICAL INDUSTRIES	
2608 TEMPLE HEIGHTS DR.	
OCEANSIDE, CA. 92056-3512 (760)724-5300	
UPPER CUTTER ASSY	
DATE: 07/20/88	BY: S. HUFF
DRAWN BY: S. HUFF	CHECKED BY: P. BRUNO
DRAWING APPROVAL: P. BRUNO	CONTRACT NO:
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°	
REV: 07/20/88	DWG NO: 646.3300
SCALE: NONE	REV: N/C
SHEET 2 OF 8	

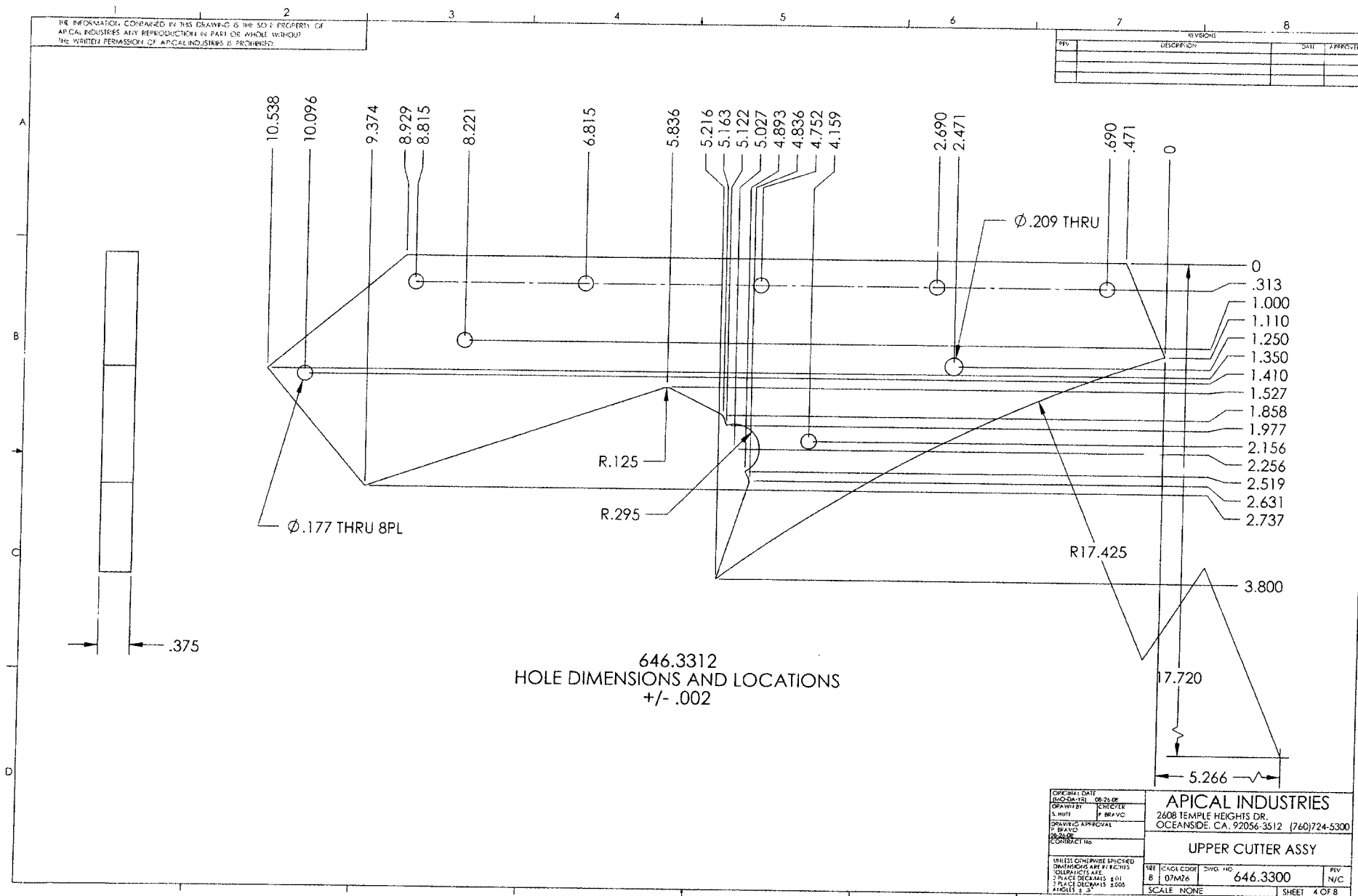
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



ORIGINAL DATE: 06-21-00		APICAL INDUSTRIES	
DRAWN BY: J. C. REESE		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. C. REESE		OCEANSIDE, CA. 92056-3612 (760) 724-5300	
DRAWING APPROVAL:		UPPER CUTTER ASSY	
CONTRACT NO.:		646.3300	
UNLESS OTHERWISE SPECIFIED:		UNIT: INCHES	REV.:
DIMENSIONS ARE IN INCHES		0.001 INCHES	N/C
TOLERANCES ARE:		0.001 INCHES	
2 PLACE DECIMALS ±.01			
3 PLACE DECIMALS ±.005			
4 PLACE DECIMALS ±.0005			
SCALE: NONE		SHEET 3 OF 8	

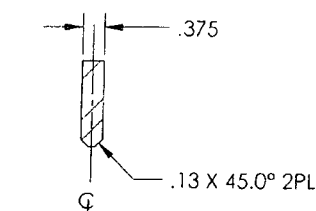
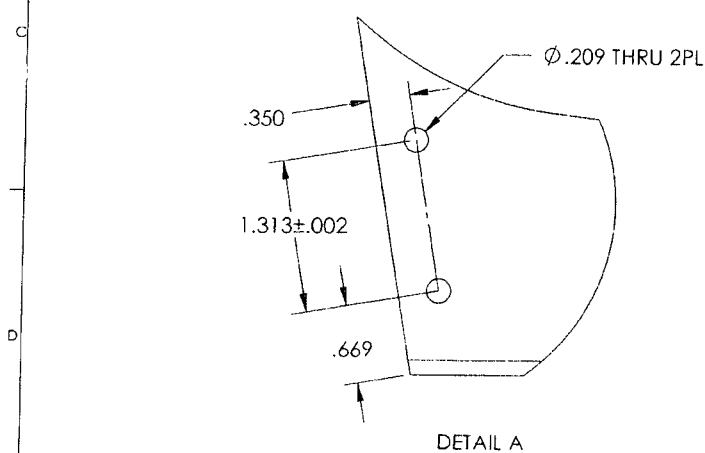
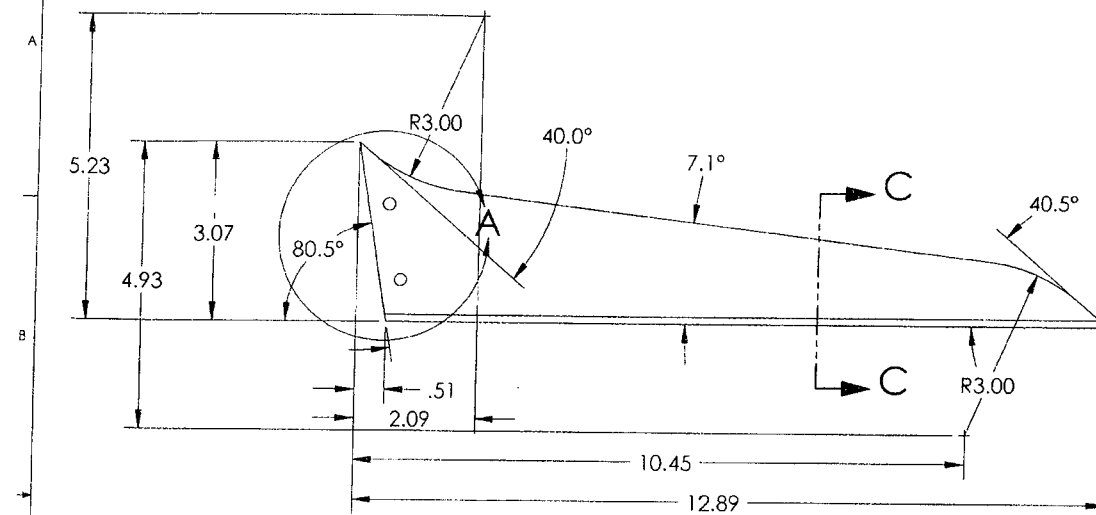
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

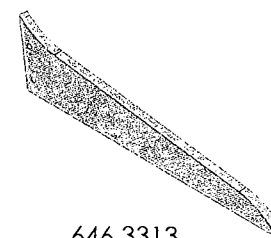


THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REV	DESCRIPTION	DATE	APPROVED



SECTION C-C

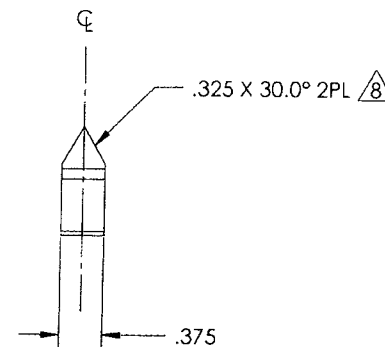
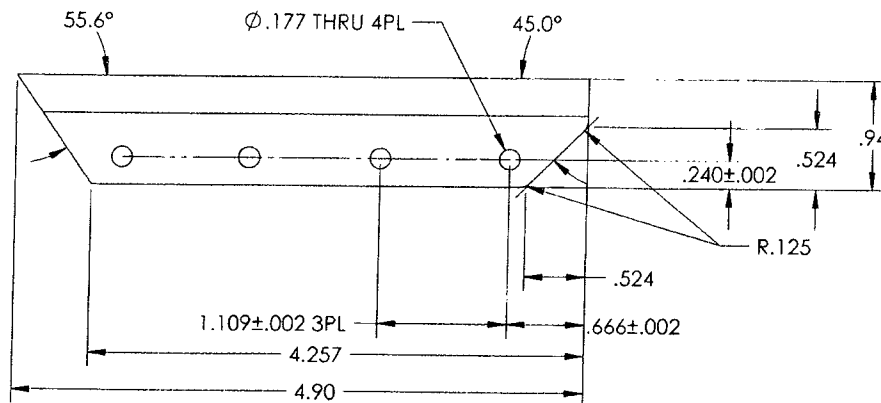
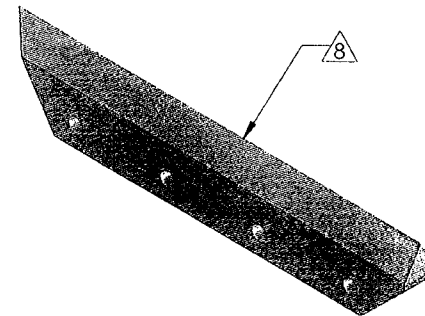


646.3313

ORIGINAL DATE: 06-28-05 DRAWN BY: J. H. H. / J. H. H. DESIGNED BY: J. H. H. / J. H. H. CHECKED BY: J. H. H. / J. H. H. APPROVED BY: J. H. H. / J. H. H.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES SURFACE FINISH: 125 TOLERANCES: FRACTIONS: 1/16 DECIMALS: .001		SEE PAGE CODE: B 07A125 DATE: 07/25/05 SCALE: NONE	REV: N/C SHEET: 5 OF 8
UPPER CUTTER ASSY		646.3300	

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REV	DESCRIPTION	DATE	APPROVED

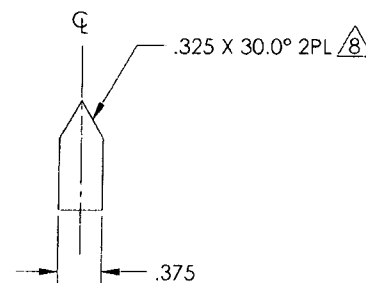
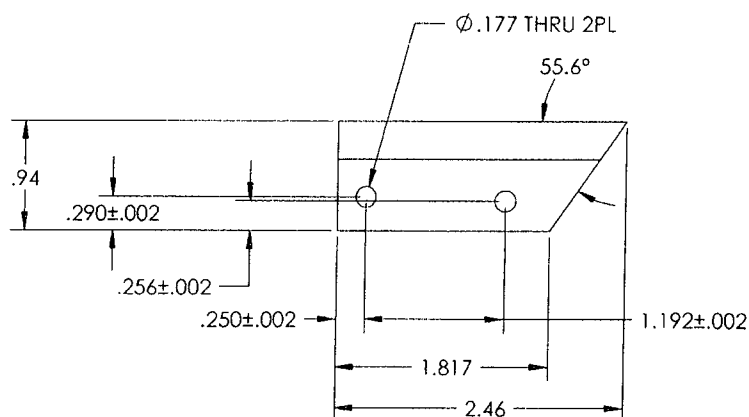
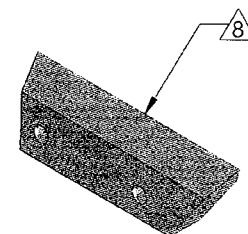


646.3314

ORIGINAL DATE: 11/01/04 (P) 08/26/08 DRAWN BY: S. HART CHECKED BY: P. BAYNE DRAWING APPROV: P. BAYNE DATE: 08/26/08 CONTRACT NO: -	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANS DE, CA. 92056-3512 (760)724-5300		
UPPER CUTTER ASSY			
ALL DIMENSIONS SPECIFIED UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED	REV 107 8	CAGE CODE 07/21/08 SCALE: NONE	QWC NO 646.3300 SHEET 6 OF 8
			REV N/C

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

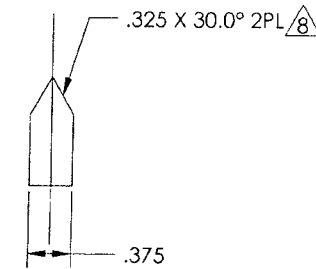
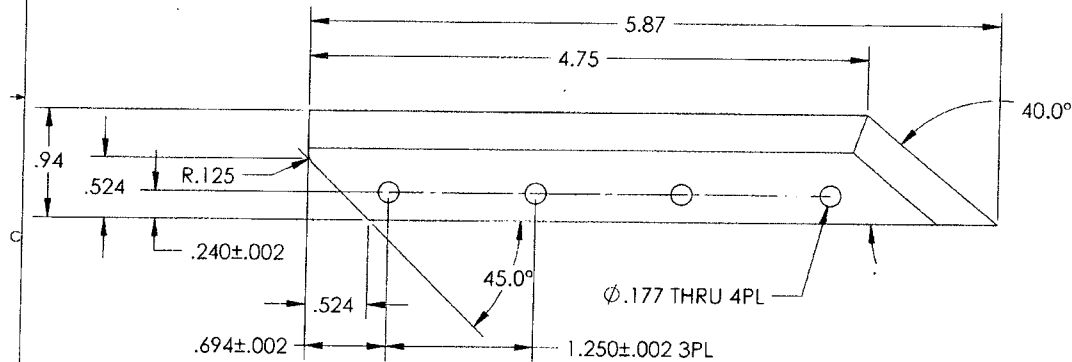
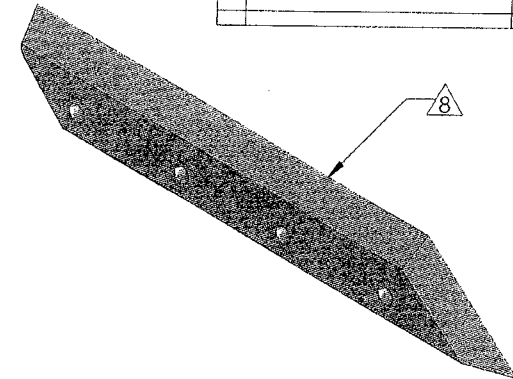


646.3315

CACAPPA ONLY (NO DATA) 01-26-98 DRAWN BY: C. HICKER P. HICKER DRAWING APPROVAL: P. HICKER 01-26-98 CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		UPPER CUTTER ASSY	
SHEET 8	PLAGE CODE 07M16	DWG NO. 646.3300	REV N/C
SCALE NONE		SHEET 7 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE 08/26/08		APICAL INDUSTRIES	
DRAWN BY: L. HESTER		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. BRAYO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL:		UPPER CUTTER ASSY	
DATE: 08/26/08		SCALE: NONE	
CONTRACT NO.		SHEET 8 OF 8	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.001 3 PLACE DECIMALS ±.0005 ANGLES ±.5°		REV. 8 CAGE CODE 07M126 DWG. NO. 646.3300	REV. N/C